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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/587,052	06/02/2000	Timothy John Lindquist	169.17	6630

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EXAMINER

PAN, DANIEL H

ART UNIT	PAPER NUMBER
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2183

DATE MAILED: 05/22/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/587,052

Applicant(s)

Lindquist

Examiner

Pan

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jun 2, 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above, claim(s) none is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11, 12, 15, and 16 is/are rejected.
- 7) ☒ Claim(s) 9, 10, 13, and 14 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Jun 2, 2000 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 5 6) ☐ Other:

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Claims 1-16 are presented for examination.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8,11,12,15,16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jennings , III et al. (5,357,152) in view of Chamdani et al. (6,112,019).

As to claim 1, Jennings disclosed a parallel reconfigurable (e.g. programmable) system comprising at least :

- a) a plurality of processing units (e.g. see fig.2);
- b) communication means [programmable circuit] by which the plurality of processing units were interconnected (e.g. see the programmable circuit and its configurable signal bus LSF and LSC in fig.2); wherein the communication medium was dynamically configurable based on program (e.g. programmable) to be processed such that the processing units can selectively arranged in at least a first and second distinct configurations (see integer and the floating point selections in col.7, lines 36-40, see also col.5, lines 1-27).

Jennings did not specifically show his the second configuration [floating point] had deeper pipeline depth than the first configuration [integer] as claimed. However, Chamdani disclosed a system including a second configuration [floating point] which had a deeper pipeline

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stage than a first configuration [integer (e.g. see fig.13, col.32, lines 19-38). It would have been obvious to one of ordinary skill in the art to use Chamdani in Jennings for including the deeper pipeline configuration as claimed because the use of Chamdani could enhance the processing ability of Jennings to increase the precision level of the operation results, and thereby maximizing the throughput of the functional elements in the system, and it could be readily done by defining the deeper pipeline configuration of Chamdani into the configuration file of Jennings such that the greater number of the pipeline stages of Chamdani could be recognized by Jennings, therefore increasing the processing power of Jennings, and in doing so, provided a motivation.

As to claim 2, Jennings also included logic configurations (see the signal changes in col.4, lines 50-68).

As to claim 3, Jennings also included data bus (e.g see col.4, lines 5-8, see also the data bus DA at a given cycle time).

As to claim 4, Jennings also included the control means for transmission and reception of the data (see the data transfer from the source to destination in col.3, lines 62-68, col.4, lines 1-8).

As to claim 5, Jennings did not specifically show the packet data bus as claimed. However, Jennings was directed to a network configuration (e.g see col.1, lines 41-52). Therefore, packet data bus was most likely in Jennings since the transfer of packet data format had been a characteristic feature of the network communications.

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As to claim 6, Chamdani also included VLIW (e.g. see col.36, lines 9-35).

As to claim 7, Jennings taught a programmable circuit which must have a program compiler to compile the program, otherwise , it would not have functioned properly.

As to claim 8, Jennings did not explicitly show the image data as claimed. However, Jennings, in the same patent, disclosed a SIMD (col.3, lines 36-41) which was a characteristic processing feature of a image processing, therefore, the image data was also applicable in Jennings.

As to claims 11,12, Jennings did not specifically show the arrangement of different number of processing units in pipeline layers as claimed. However, Chamdani disclosed different processing units (integer and floating point units) had arranged in different pipeline layers (see the seven and ten stage deep in col.32, lines 21-32). It would have been obvious to one of ordinary skill in the art to use Chamdani in Jennings for including the different pipeline layers as claimed because the use of Chamdani could increase the control capability of Jennings to achieve a predetermined set of precision level of the operation results, and thereby optimizing the throughput of the functional elements in the system, and it could be readily done by defining the deeper pipeline configuration of Chamdani into the configuration file of Jennings such that the different number of the pipeline stages of Chamdani could be recognized by Jennings, therefore increasing the processing power of Jennings, and in doing so, provided a motivation.

As to claims 15,16, Jennings also directed to SIMD processing (e.g. see col.3, lines 35-43).

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Claims 9,10, 13 ,14 are objected to as being dependent upon a rejected base claim, but would be allowable, for specifically reciting the specific feed forward limitation of the image data, if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Pan, Esq. whose telephone number is 703 305 9696. The examiner can normally be reached on M-F from 8:00 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Chan, can be reached on (703) 305 9712. The fax phone number for the organization where this application or proceeding is assigned are

- a) before final 703 746 7239
- b) after final 703 746 7238
- c) customer service 703 746 7240.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305 3900 .

DANIEL H. PAN
PRIMARY EXAMINER
GROUP